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ORIGINAL ARTICLE

A STUDY ON ICT IN RELATION TO SELF–CONCEPT AND SELF-CONFIDENCE OF IN-SERVICE TEACHER TRAINEES

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ABSTRACT

"Institutions of higher education in developing countries have mostly kept to their traditional functions and objectives, and the 'ivory tower' idea that they should only deal with theoretical knowledge, show interest to the formation of theory and research and value knowledge ownership and reservation idea." It has hardly concerned itself with other levels and types of education except through some adhoc individual efforts without any institutional mechanism, which lays at the basic education level has been ignored to make the whole education system weak and fragile.

KEYWORDS: higher education, basic education.

1. INTRODUCTION

In the light of changing perceptions about what constitutes appropriate skills for the modern era, some organizations are promulgating educational standards that attempt to define what all students should know about ICTs. Although it may be assumed that students will have to acquire new skills in order to compete and contribute in an increasingly ICT dominated global economy. It is not clear what skills are necessary; 'Unlike the more stable content and goals we have for other areas of study, technology continues to change and evolve; with these changes come ever-new goals for how technology should serve learning, and what students should know about technology'.

A wide range of initiatives are taking place all over the world, at all levels of education, showing a potential for developments which looks almost unlimited. ICT equipment and Internet connectivity is much more widespread in schools around the world. In the United States the ratio of the students per computer dropped from 63:1 to 6: 1 in 1997 while the number of internet access has grown from35% to 72% from 1994 to1997 In Japan over 94% of

the public schools were equipped and 10% were connected to the internet as per 1997 report. In New Zealand 83% of primary schools and 94% of secondary schools have Internet access. In the United States a 1998 survey found that 735 of the nation's public libraries offered basic Internet access to the public.

2. ROLE OF TEACHER IN THE UTILIZATION OF ICT IN TEACHING:

Teaching is one of the most complex human endeavors imaginable. Teachers arrange content information around an organizing idea, determine appropriateness of available resources, and make judgment about the people involved. Generally, the teacher serves as decision maker regarding what to teach, when to teach and how to teach it. The teacher is often the primary information of source. The teacher has to play a pivotal role for the success of the educational technology. The teaching aids either modern or traditional only supplement the efforts of the instructor to enhance the learning process. They cannot be a substitute for him. The technologies assist him to do his work in an efficient manner to achieve the educational objectives. Although Education is involved with a number of technological improvements, it takes long time for all the educators to gain mastery in their applications. There must be a provision of allocating some budget for purchasing and maintaining a few instructional media which are absolutely necessary in every educational institution. There is no convincing reason to believe that technology will isolate students or de-humanize the learning process because the teacher is the master for the students and the machine. He should encourage the technology that would help to make teaching-learning process a complete success. For this, he should not only provide the best instructional tools but also use them to the best advantage of the students. Further he should design instructional management system that welcomes teachers as important partners. Each Technology has its advantages and limitations and no single technology is useful for all types of learning. While selecting the media, the criteria to be kept in mind are Availability, Accessibility, Acceptability, Cost and Validity of the media. The fear about technology among the teachers is that it will replace the teacher and will create unemployment. No technology can produce new things because output depends on the nature of input. The input aspect is more important and it depends on the teacher. The instructional material cannot be prepared by educational technology. Therefore, Educational technology will not replace the human teacher but will help him in improving teaching-learning process. In recent years, educational access to digital information and communication technologies (ICTs), tools, applications, networks, and media worldwide has grown dramatically. Education is facing a significant challenge in preparing students and teachers for our future 'knowledge-based' society because most of the teachers are to be trained to use ICTs and the majority of existing school buildings are not equipped to integrate the new information and communication technologies. ICTs are quickly becoming more accessible, but it is important to note that earlier technologies play a critical role in education worldwide. Access to Films, Videotapes, Telephones. Television or Radio is still far more commonplace than access to a Computer or to the Internet and World Wide Web (WWW).

The new digital ICTs are not single technology, but combinations of hardware, software, media, and delivery systems. They differ in several important dimensions from older technologies: they can integrate multiple media into single educational applications; they are

interactive and include the capacity to control, manipulate, and contribute to the information environment. They are flexible, offering freedom from rigid scheduling and barriers of time and location; through connectivity, they provide access to every other person on the planet who has an internet account, to thousands of information archives, and to millions of web pages. These four dimensions such as integration of multi-media, interactivity, flexibility of use, and connectivity-distinguish digital ICTs from previous technologies. Because of these differences, educators are finding new powerful ways to integrate digital ICTs in to the curricula.

3. HYPOTHESES:

1) $H_0$1: There is no signification difference in ICT Usability and Self-concept of in-service teacher trainees of Karnataka State Open University, Mysore.
2) $H_0$2: There is no signification difference in ICT Usability and Self-confident of in-service teacher trainees of Karnataka State Open University, Mysore.
3) $H_0$3: There is no signification difference in Self-concept and Self-confident of in-service teacher trainees of Karnataka State Open University, Mysore.
4) $H_0$3: There is no signification difference in ICT Usability, Self-concept and Self-confident of in-service teacher trainees of Karnataka State Open University, Mysore.

4. REVIEW OF RELATED LITERATURE:

1) **Bates (1991)** had highlighted that there are two very different types of interactivity in learning: social and individual. Social interaction between learners and teachers need to be balanced with the individual student's interaction with teaching – learning resources, including textbooks, study guides, audiotapes, videotapes and computer assisted learning programs. He argues that, students in conventional institutions are engaged for the greater part of their time in meaningful, face to face interaction is a myth, and that "for both conventional and distance education students, by far the largest part of their studying is done alone, interacting with textbooks and other learning media".
2) **Stark, R. and Others, (2000)** conducted a study on the impact of information and communications technology initiatives and the outlines of the interim findings of a survey (conducted in 1998-1999) of the Scottish Executive Education Department. It was designed to assess the impact of a variety of ICT initiatives on pupils' skills and knowledge. Respondents in this study reported that ICT improved motivations, enhanced learning and teaching, improved communication and access to information, and improved efficiency and feelings of independence. Teachers perceived ICT to be useful for streamlining current teaching procedures, gaining access to new professional opportunities and new exciting teaching opportunities.
3) **UNESCO (1998)** observed that the rapid breakthrough in new information and communication technologies would further change the way knowledge was developed, acquired and delivered. It was also important to note that the new technologies have offered opportunities to innovate on administration, course content and teaching methods and to widen access to higher learning.
4) **Chahal** and **Nisha (2011)** conducted “A study of emotional maturity, self-confidence and academic achievement of adolescents in relation to their gender and urban-rural background”.

The study examined the difference between male and female adolescents on their level of self-confidence and academic achievement. The findings of the study revealed significant difference between the male and female adolescents on their level of self-confidence and academic achievement. Significant difference between urban and rural adolescents on their level of self-confidence and academic achievement was also found out.

5) **Inoue [2001]**, Conducted study on title "Self Concept in Japanese students: Its relation to teacher rating." The result shows that the significant positive correlation between teacher's rating regarding student's academic level & social skills & student responses matching these traits, The internal consisting of the SEI [Self Esteem Inventory, Coppersmith, 1967] is adequate but some what lower than that of the SDQ [Self - Description Questionnaire, Marsh, Parker & Smith- 1983]

5. DESIGN OF THE STUDY:

Design is the heart of research upon which the entire process of research is carried out. In this study, the investigator followed Survey method to study the ICT utilization, Self-concept and Self-confidence among in-service teacher trainees.

5.1. Sample:

In the present research sample was taken from Karnataka State Open University, Mysore. Total 400 in-service teacher trainees were randomly selected.

5.2. Tools used for data collection:

The following tools have been used in the present study:

1. ICT Utilization prepared by Investigator
2. Self-concept questionnaire by R.K. Saraswat.
3. Agnihotri's self confidence inventory

5.3. Statistical Techniques Used:

1) Mean
2) S.D.
3) t-test,
4) one-way analysis and
5) Co-efficient of correlation

6. VARIABLES:

Dependent variables

There two dependent variables identified for the study were as follows

1. Self -Confidence
2. Self – Concept

Independent variables

ICT Utilization

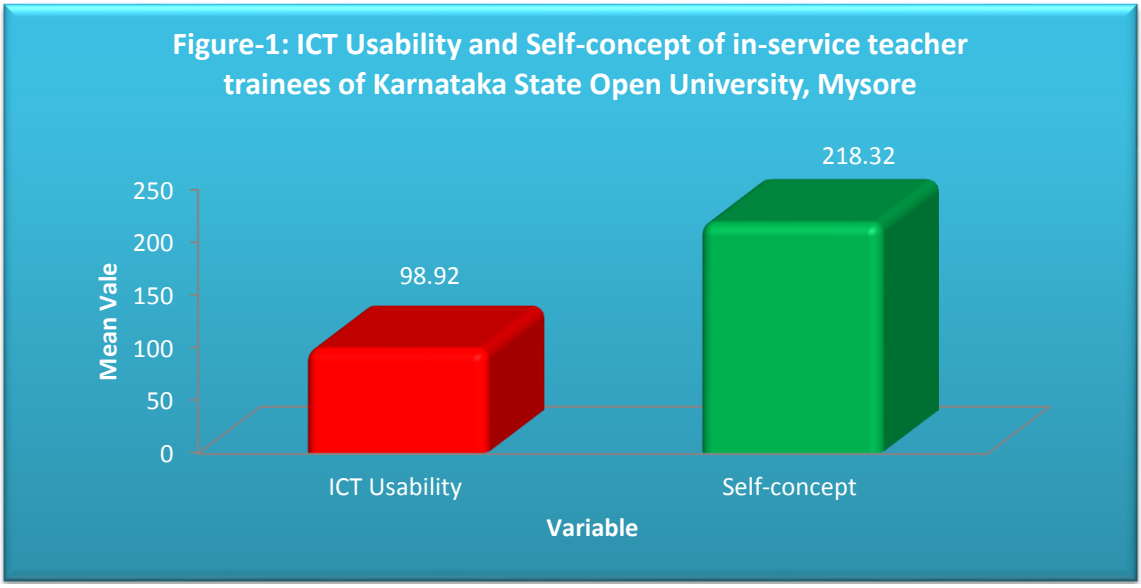
7. Analysis of the data:

1) $H_0$1: There is no signification difference in ICT Usability and Self-concept of in-service teacher trainees of Karnataka State Open University, Mysore.

	Factor	N	Mean	S.D.	t
Variables	ICT Usability	400	98.92	7.252	4.212**
	Self-concept	400	218.32	7.442	

** Significant at 0.05 Level

The above Table 4.16 reveals that the 't' value 4.212 of the average Mean scores of ICT Utilization and Self-concept of in-service teacher trainees is Significant at 0.05 level. Hence hypothesis $H_0$16 hypothesis rejected and alternate hypothesis is accepted i.e. there is significant difference between the scores of ICT Usability and Self-concept of in-service teacher trainees of Karnataka State Open University, Mysore. The data can be shown effectively by the following figure:

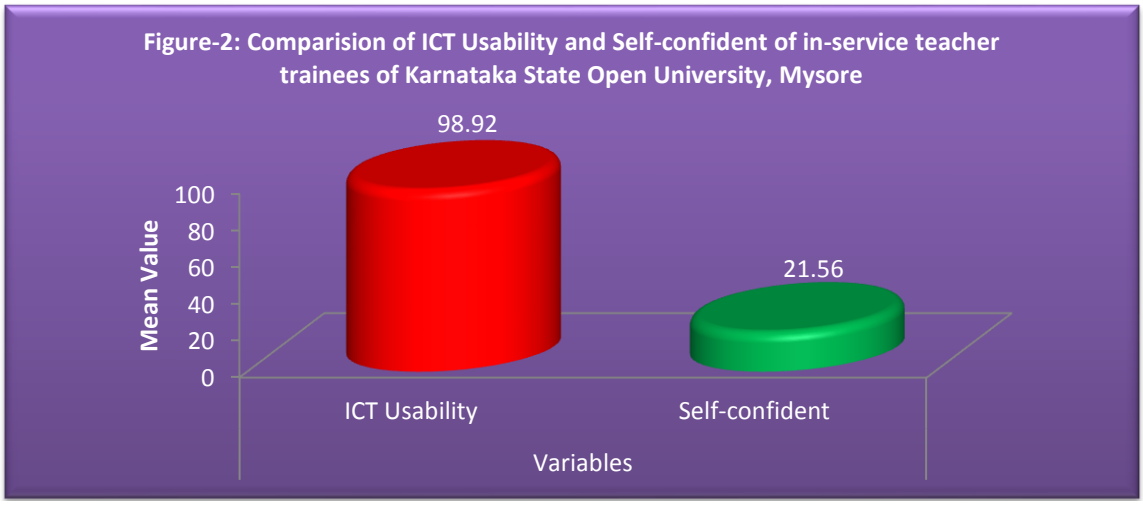


2) $H_0$2: There is no signification difference in ICT Usability and Self-confident of in-service teacher trainees of Karnataka State Open University, Mysore.

	Factor	N	Mean	S.D.	t
Variables	ICT Usability	400	98.92	7.252	3.212**
	Self-confident	400	21.56	8.401	

** Significant at 0.05 Level

The above Table 4.16 reveals that the 't' value 3.212 of the average Mean scores of ICT Utilization and Self- confident of in-service teacher trainees is Significant at 0.05 level. Hence hypothesis $H_0$17 hypothesis rejected and alternate hypothesis is accepted i.e. there is signification difference in ICT Usability and Self-confident of in-service teacher trainees of Karnataka State Open University, Mysore. The data can be shown effectively by the following figure:

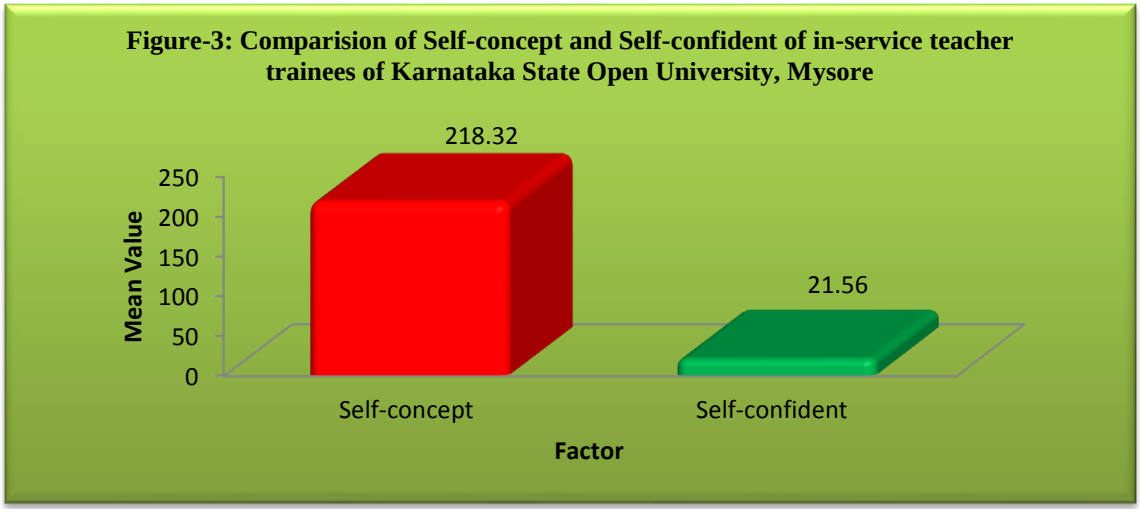


3) $H_0$3: There is no signification difference in Self-concept and Self-confident of in-service teacher trainees of Karnataka State Open University, Mysore.

	Factor	N	Mean	S.D.	t
Variables	Self-concept	400	218.32	7.442	4.987**
	Self-confident	400	21.56	8.401	

** Significant at 0.05 Level

The above Table 4.16 reveals that the 't' value 4.987 of the average Mean scores of Self-concept and Self- confident of in-service teacher trainees is Significant at 0.05 level. Hence hypothesis $H_0$18 hypothesis rejected and alternate hypothesis is accepted i.e. there is signification difference in Self-concept and Self-confident of in-service teacher trainees of Karnataka State Open University, Mysore. The data can be shown effectively by the following figure:



4) $H_0$4: There is no signification difference in ICT Usability, self-concept and self-confident of in-service teacher trainees of Karnataka State Open University, Mysore.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7321300.4817	2	3660650.2408	16302.7634	0.0000
Within Groups	268776.4175	1197	224.5417		
Total	7590076.8992	1199			

Above table represents the result of ANOVA between the ICT Usability, self-concept and self-confident of in-service teacher trainees of different Karnataka State Open University, Mysore. From the table it has been found that F ratio is 8.6366 which is significant. It shows significant difference of ICT Usability, self-concept and self-confident among in-service teacher trainees of Karnataka State Open University, Mysore. Therefore the declarative hypothesis can be accepted.

5) $H_0$5: There is no relationship between different variables of in-service teacher trainees of Karnataka State Open University, Mysore:

		ICT	Self-concept	Self- confidence
ICT Utilization	Pearson Correlation	1	-0.851	0.822
	Sig. (2-tailed)	**0.0**	0.655	0.662
	N	400	400	400
Self-concept	Pearson Correlation	-0.851	1	0.629
	Sig. (2-tailed)	0.985	**0.0**	0.565
	N	400	400	400
Self- confidence	Pearson Correlation	0.822	0.629	1
	Sig. (2-tailed)	0.662	0.565	**0.0**
	N	400	400	400

From above table, it can be seen that ‘r’ value is 0.851, which is significant. Therefore we can conclude that there is significant relationship between ICT Utilization and Self-concept of in-service teacher trainees.

From above table, it can be seen that ‘r’ value is 0.822, which is significant. Therefore we can conclude that there is significant relationship between ICT Utilization and Self-confident of in-service teacher trainees.

From above table, it can also be seen that ‘r’ value is 0.629, which is significant. Therefore we can conclude that there is significant relationship between Self-confident and Self-concept of in-service teacher trainees.

8. FINDINGS:

1) There is signification difference in ICT Usability and Self-concept of in-service teacher trainees of Karnataka State Open University, Mysore.

2) There is signification difference in ICT Usability and Self-confident of in-service teacher trainees of Karnataka State Open University, Mysore.

3) There is signification difference in Self-concept and Self-confident of in-service teacher trainees of Karnataka State Open University, Mysore.
4) There is signification difference in ICT Usability, self-concept and self-confident of in-service teacher trainees of Karnataka State Open University, Mysore.
5) There is relationship between different variables of in-service teacher trainees of Karnataka State Open University, Mysore

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